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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
NGUYEN, STEVEN H D	
ART UNIT	**PAPER NUMBER**
2665	

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/772,237	BELAICHE, VINCENT	
	Examiner	Art Unit	
	Steven HD Nguyen	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *14-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/553064.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/6/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
(e) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(f) BRIEF SUMMARY OF THE INVENTION.
(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(h) DETAILED DESCRIPTION OF THE INVENTION.
(i) CLAIM OR CLAIMS (commencing on a separate sheet).
(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

1. The disclosure is objected to because of the following informalities: Page 2, lines 32 to page 3, lines 1-2 should be moved to page 18, line 4.

Appropriate correction is required.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 14-24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6545983 in view of Lundsjo (USP 6473442).

As claims 14, 18, 23 and 24, the claims 1 and 5 of USP 6545983 discloses the steps of transmitting a parameter and calculating. However, USP 6545983 fails to disclose some bits of said input block are punctured or repeated based on a variation between the final size and initial size in rate matching step. In the same field of endeavor, Lundsjo discloses some bits of said input block are punctured or repeated based on a variation between the final size and initial size in rate matching step (Fig 3 and 4 wherein some bits are punctured or repeated based on variation between input size and output size, Fig 4b, TrCHa with 5 bits repeated and TrCHc with 6 bit to be punctured). Therefore, it would have been obvious to one of ordinary skill in the art to implement a step of puncturing or repeating in the rate matching step before multiplexing these channel into a composite channel as disclosed by Lundsjo.

As claims 15 and 20, the claim 2 and 7 is similar to claims 15 and 20.

As claim 16 and 22, the claims 3 and 9 are similar to claims 16 and 22.

As claims 17 and 21, the claim 4 and 8 are similar to claim 17 and 21.

As claim 19, the claim 6 is similar to claim 19.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 14-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Lundsjo (USP 6473442).

Regarding claim 14, Lundsjo discloses a method for configuring a telecommunication system (Fig 1) comprising a plurality of entities implementing a phase of communicating data conveyed by a plurality of transport channels, wherein said entities comprise at least one sending entity (Fig 3, Ref 124) and at least one receiving entity (Fig 3, Ref 130), a phase of communication of said sending entity comprises a plurality of processing procedures specific to said plurality of transport channels (Fig 3A and 3B), each processing procedure comprises a rate matching step and said rate matching step executes a transformation of an input block of an initial size into an output block of a final size by at least one of puncturing and repetition (Fig 3A, Ref 308 and Fig 3B, Ref 326, Fig 4A and 4B, Fig 6 and 7), said method further comprising a step of transmitting a parameter representative of a maximum puncture rate from said receiving

entity to said sending entity (Fig 6, Ref 608, col. 2, line 65 to col. 3, lines 12, rate matching offset value is read on maximum puncture rate); a step of calculating, by said sending entity, for each of said processing procedures, said final size of said output block as a function of said initial size of said input block on a basis of a criterion, said criterion being dependent on said parameter transmitted by said step of transmitting (Fig 7, col. 5, lines 35 to col. 6, line 36, a criterion read on quality of service wherein QOS based on bit error rate, latency, frame error rate); and wherein some bits of said input block are punctured or repeated based on a variation between said final size and said initial size in said rate matching step (Fig 4 and 7, the repeated or punctured bits varied according the input size and output size, Trcha, input size 50 bits and 5 bits repeated bits added to output size in order to obtained 55 bits and Trchc input size 50 bits and 6 bits puncture in order to obtain 44 bits of output size).

Regarding claim 15, Lundsjo discloses said criterion is further dependent on a plurality of predefined parameters relative to said transport channels grouped together within a composite of transport channels, each predefined parameter being representative of a rate matching ratio of a transport channel comprised within said composite of transport channels (Col. 5, line 28 to col. 6, line 10).

Regarding claim 16, Lundsjo discloses said step of calculating further comprises a step for calculating a set of available sizes for a multiplexing frame with said parameter; a step for selecting one of said available sizes as a maximum payload of said multiplexing frame; and a step for calculating said final size as a function of said initial size, at least one of said predefined parameters, and said maximum payload of said multiplexing frame (Fig 4A and 4B the

parameters are used to determine the multiplexing frame, 320 bit or 160 bits based on the input size of the channels and rate offset value, quality and SNR; See col. 5, lines 45-57).

Regarding claim 17, Lundsjo discloses each of said predefined parameters vary in accordance with a quality of service of each of said transport channels comprised within said composite of transport channels (Col. 6, lines 5, lines 36-56 the parameters varies according QOS of each channel which based on BER, FER and latency).

Regarding claims 18 and 23-24, Lundsjo discloses (Fig 1-7 and col. 2, lines 44 to col. 10, lines 52) a station configured to communicate data over a plurality of transport channels grouped together within a composite of transport channels (Fig 3) comprising means for transforming an input block of an initial size into an output block of a final size by at least one of puncturing and repetition based on a variation between said final size and said initial size (Fig 3, Ref 308 and 326 and Fig 7 for transform input size to output size according to punctured or repeated based on variation of the input and output size, See Fig 4); means for receiving a parameter representative of a maximum puncture rate (Fig 6, Ref 608); means for calculating said final size as a function of said initial size of said input block on a basis of a criterion, said criterion being dependent on said parameter (Fig 7, col. 5, lines 35 to col. 6, line 36, a criterion read on QOS of each channel wherein QOS determined based BER, FER and Latency).

Regarding claim 19, Lundsjo discloses said calculating means calculates said final size so that said final size varies in accordance with a maximum payload of one and a same multiplexing frame (Fig 4, the parameters are used to determine the multiplexing frame, 320 bit or 160 bits based on the input size of the channels and rate offset value, quality and SNR).

Regarding claim 20, Lundsjo discloses said criterion is further dependent on a plurality of predefined parameters for said composite of transport channels, each of said predefined parameters being representative of a rate matching ratio for each of said transport channels comprised within said composite of transport channels (Col. 5, line 28 to col. 6, line 10).

Regarding claim 21, Lundsjo discloses each of said predefined parameters vary in accordance with a quality of service of each of said transport channels comprised within said composite of transport channels (Col. 5, line 28 to col. 6, line 10, the parameters varies according QOS of each channel).

Regarding claim 22, Lundsjo discloses said means for calculating further comprises means for calculating a set of available sizes for a multiplexing frame with said parameter; means for selecting one of said available sizes as a maximum payload of said multiplexing frame; and means for calculating said final size as a function of said initial size, at least one of said predefined parameters, and said maximum payload of said multiplexing frame (Fig 4A and 4B the parameters are used to determine the multiplexing frame, 320 bit or 160 bits based on the input size of the channels and rate offset value, quality and SNR, See col. 5, lines 45-57).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Park (USP 6166667) discloses a selection of turbo or non turbo error correction codes based on data type or length.

Eroz (USP 6370669) discloses a sets of rate compatible universal turbo codes nearly optimized over various rates and interleaver sizes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (571) 272-3159. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven HD Nguyen
Primary Examiner
Art Unit 2665
1/31/05